

**THE INFLUENCE OF PROBLEM BASED LEARNING
ON THE STUDENTS' READING COMPREHENSION
IN DESCRIPTIVE TEXT AT THE SEVENTH GRADE
MTS PEMNUTALANG PADANG IN ACADEMIC
YEAR 2020/2021**

A Thesis

**Submitted as a Partial Fulfillment of the Requirements
for S-1 Degree**

By:
**REZA AGUSTIN NEDIA
NPM.1411040335**

Study Program : English Education



**TARBIYAH AND TEACHER TRAINING FACULTY
RADEN INTAN STATE ISLAMIC UNIVERSITY
LAMPUNG
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LAMPUNG
2021**

ABSTRACT

In order to make the students feel happy when they were studies in the classroom, it needs a good method, strategy or technique which can be applied by students. The objective of the research was to find out whether the use of problem based learning on the students reading comprehension in descriptive text at the seventh grade MTs PEMNU Talang Padang in academic year 2020/2021. A quasi-experimental design was used in three meetings for treatments, 2 x 40 minutes in each meeting. The population was the seventh grade of MTs PEMNU Talang Padang. The total sample were 60 students were taken from two classes, VII 1 (experimental class) and VII 2 (control class) by using cluster random sampling. This research used quasi-experimental design. In collecting the data, the research used instruments in the form of multiple choice test which were try out. After administering pre-test and post-test, the researcher analyzed the data which were normal distribution and homogeneous by using SPSS to computed independent sample t-test.

After conducting the post-test, the data that had been collected from pre-test and post-test were analyzed. Based on the analysis, it was found the result of this research of $\text{Sig.}(P_{\text{value}}) = .005 < \alpha = 0.050$. It means that H_a accepted and H_o rejected. It can be concluded that there is a significant influence of problem based learning on the students' reading comprehension in descriptive Text at the seventh grade MTs PEMNU Talang Padang in academic year 2020/2021.

Keyword: *problem based learning, reading comprehension, descriptive Text, quantitative research.*

DECLARATION

Hereby, I state that this thesis entitled “The Influence of Problem based Learning on The Students’ Reading Comprehension in Descriptive Text at The Seventh Grade MTs PEMNU Talang Padang in Academic Year 2020/2021” was completely my own work. I am fully aware that I have quoted some statements and theories from various sources and they are properly acknowledged in the text.

Bandar Lampung,
Declared by,

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Reza Agustin Nedia
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COMPREHENSION IN DESCRIPTIVE TEXT AT
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ADMISSION

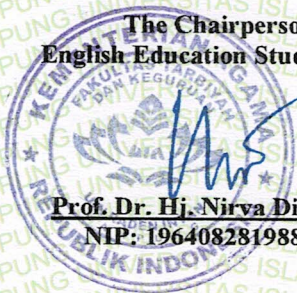
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MOTTO

الرَّحِيمِ الرَّحْمَنِ اللَّهُ بِسْمِ

أَقْرَأَ بِاسْمِ رَبِّكَ الَّذِي خَلَقَ ١ خَلَقَ الْإِنْسَانَ مِنْ عَلَقٍ ٢ أَقْرَأَ وَرَبُّكَ أَلْعَلَّكَ رَبُّ

Recite in the name of your Lord Who created,(2) created man from a
clot of congealed blood. (3) Recite: and your Lord is
Most Generous

(Chapter: Al-Alaq: 1-3)¹



¹ Tafheem Al Quran surah 96 Al-Alaq', Ayat 1-3" (On-line),
Available on :
<http://www.islamicstudies.info/>(August , 01 2019)

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First of all, Praise to be Allah the Almighty, the Most Merciful, the Most Beneficent for His blessing and mercy given to complete this thesis. Then, the best wishes and salutations be upon the great messenger prophet Muhammad peace be upon him. The primary aim of writing this thesis is to fulfill students' partial fulfillment of the requirement to obtain S1-degree. Then, the gratitude and thankfulness are given to the following people for their ideas, time and guidance for this thesis :

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Finally, none or nothing is perfect for this thesis. Any corrections comments and criticism for the betterment of this thesis are always open heartedly welcome.

BandarLampung, 2021
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CURRICULUM VITAE

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DEDICATION

From deep of my heart, this thesis is dedicated to everyone who cares and loves me. I would like to dedicate this thesis to:

1. Allah SWT who always loves and keeps me everywhere and every time.
2. My beloved parents, Mr. Abdul Haris and Ms. Inda Diana who always love and keep on praying for my life and success. I love you forever.
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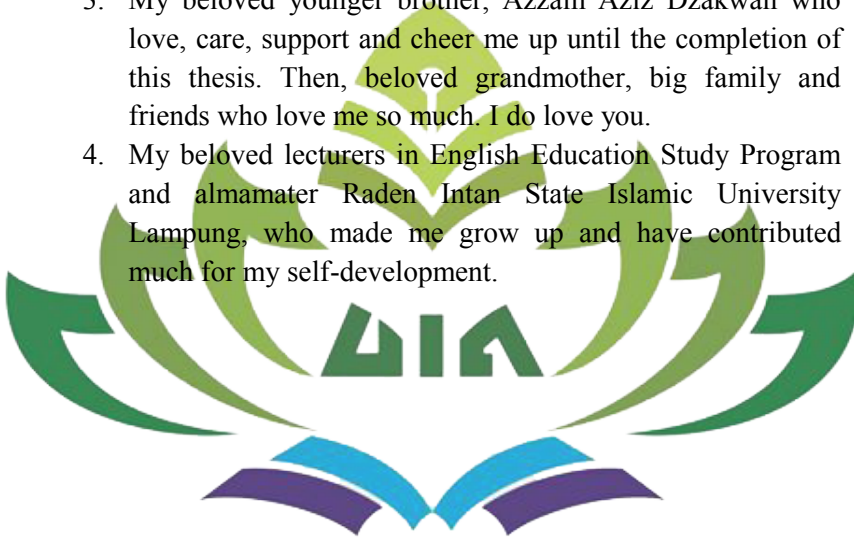


TABLE OF CONTENTS

	Page
COVER.....	i
ABSTRACT.....	iii
DECLARATION.....	iv
APPROVAL	v
ADMISSION	vi
MOTTO	vii
ACKNOWLEDGEMENT	viii
CURRICULUM VITAE	x
DEDICATION	xi
TABLE OF CONTENTS.....	xii
LIST OF TABLE	xv
LIST OF FIGURES	xvi
LIST OF APPENDICES.....	xvii
CHAPTER I INTRODUCTION	
A. Background of the Problem	1
B. Identification of the Problem	3
C. Limitation of the Problem	3
D. Formulation of the Problem	3
E. Research Objective and Benefits	3
1. Objective	3
2. Benefits	4
F. Scope of the Research.....	4
1. Subject of the Research.....	4
2. Object of the Research.....	4
3. Place of the Research.....	4
4. Time of the Research	4
CHAPTER II REVIEW OF RELATED LITERATURE	
A. Frame of theories	
1. Reading Comprehension.....	5
a. Models of Reading.....	7
b. The Importance of Learning Reading Comprehension	7

c. Comprehension Level	8
d. Test Criteria	9
e. Measurement of Reading Comprehension	10
2. Concept of Problem Based Learning	10
a. Definition Of PBL	10
b. Instructional Procedure of PBL	11
c. Characteristics Of PBL	13
d. Advantages and Disadvantages of PBL	13
3. The Concept of Number Heads Together (NHT) Strategy.....	15
a. Definition of NHT Strategy	15
b. Principles	17
c. Advantages and Disadvantages.....	20
4. Implementation of PBL in Teaching Reading.....	21
A. Theoretical Framework	21
B. Hypothesis	23

CHAPTER III RESEARCH METHODOLOGY

A. ResearchDesign	25
B. Variables.....	26
C. Operational Definition of Variable	26
D. Population, Sample, and Samplin	
E. technique.....	27
F. Data Collecting	28
G. Procedure.....	28
H. Instrumen.....	29
I. Treatments to The Experimental and	
J. Control Classes	33
K. Scoring.....	34
L. Test Validity	34
M. Reability Test.....	36
N. Data Analysis.....	36

CHAPTER IV RESULT AND DISCUSSION

A. Data Description.....	39
1. Result Pretest Experimtal Class.....	39
2. Result Pretest ControlClass	40
3. Result Posttest Experimental Class	41
4. Result Posttest Control Class	42
B. Data Analysis Prerequisite Test.....	44
C. Hypothesis Test.....	45
D. Discussion	46
E. Limitations Of Research.....	48

CHAPTER V CONCLUSION AND SUGGESTION

A. Conclusion	49
B. Suggestion.....	49

REFERENCES	51
-------------------------	-----------

APPENDICES.....	55
------------------------	-----------



LIST OF THE TABLES

	Page
Table 1 Pre-test and Post-test design	25
Table 2 The distribution of seventh grade across two classes at MTS PEMNU	27
Table 3 item specification for the try-out Pre-test	30
Table 4 item specification for the post-test	32
Table 5 Score PBL Pre-tes	45
Table 6 Score PBL Post-test	46
Table 7 Averange Score Of each Sample Group	47
Table 8 Result Paired Sampel Test.....	48



LIST OF FIGURES

Page

Figure 1 Test instrument of try-out pre-test question 11-12	66
Figure 2 Test instrument of try-our pre-test question 25-29	71



LIST OF APPENDICES

	Page
Appendix 1 The Result of Interview for the English Teacher	57
Appendix 2 Questionnaire For The Students In Preliminary Research	59
Appendix 3 The Result of Percentage Questionnaire with Students	60
Appendix 4 Students' Score Reading Comprehension of Students at the MTS PEMNU Talang Padang in academic year of 2020	62
Appendix 5 Test Instrument of Try out pretest	64
Appendix 6 Test Instrument of Try out post test	75
Appendix 7 Key Answer	87
Appendix 8 RPP Control Class 1	88
Appendix 9 RPP Control Class 2	96
Appendix 10 RPP Control Class 3	103
Appendix 11 RPP Experimental Class 1	111
Appendix 12 RPP Experimental Class 2	118
Appendix 13 RPP Experimental Class 3	124
Appendix 14 The Score of Pre-test and Post-test Experimental Class	131
Appendix 15 Score control class	132
Appendix 16 Score of experimental class	133
Appendix 17 Results of Pre-test in Experiment Class	135
Appendix 18 Results of Pre-test in Control Class	136
Appendix 19 Results of Post-test in Experimental Class	137
Appendix 20 Results of Post-test in Control Class	138
Appendix 21 One-Sample Kolmogorov-Smirnov Test	139
Appendix 22 Average Score of Each Sample Group	140
Appendix 23 Result of Paired Sample t-Test	141
Appendix 24 Documentation	142

CHAPTER I INTRODUCTION

A. Background of the Problem

Language is one of the most important aspects in human life. People learn and use language to communicate with each other and ensure effective and efficient human interaction. A language learner, therefore, should master the language skills to communicate most effectively and efficiently. Reading, apart from other language skills such as writing, listening and speaking, has a special role and deserves more stress in the classroom. Reading is known to benefit mental development and stimulate eye muscles. In fact, reading involves a greater level of concentration and adds to the conversational skills of the reader. It is an indulgence that consistently enhances the knowledge acquired and helps readers to decipher new words and phrases that they come across in everyday conversations. Reading habit can become a healthy addiction which enriches the learning of information on various topics. It encourages us to stay in touch with both contemporary and past writers and makes us sensitive to global issues.

Reading is concerned with exploring a body of text for information.¹ Effective reading is not easy to master since it requires a set of reading skills.² Readers generally experience problems when they want to accomplish a specific purpose of reading. The problems are related to reading habit, reading techniques, reading interest, eyes' work, and motivation. Optimal reading skills cannot be acquired if the reader maintains poor habit when reading. For example, interpreting the text word by word will definitely make reading inefficient because it will take more time to grasp the overall idea of the text. Proper reading techniques are also needed to hone reading

¹Andrew P. Johnson, *Teaching Reading and Writing*, USA: Rowman & Littlefield Publishing Group, 2008, p. 3

²Ibid., p. 5

skills, while high level of motivation and reading interest play a major role in initiating a potential reading activity.

At MTs PEMNU Talang Padang, reading makes up a greater portion of the classroom activities.³ The teaching/learning materials used in the classroom consist mostly of texts. In classroom reading activities, the students are required to be able to comprehend texts. As a result, they are taught how to read effectively and efficiently. However, they could hardly find motivation to read a text, let alone answer the reading comprehension questions. It is undeniable that the students struggle to deal with classroom reading activities because they have not understood how to get information out of the text in an effective and efficient manner. A monotonous teaching technique also contributes to the low level of learning motivation among the students. This situation is worrying and needs to be addressed carefully.

A suitable teaching technique should be adopted to boost students' interest and motivation in reading activities. If the students can grow more interest and motivation in reading, they will enjoy the teaching/learning process and understand the lessons more easily. Unfortunately, the teacher only uses a teaching technique that encourages word-by-word translation in reading, which makes the students feel frustrated with reading comprehension.

According to the English teachers who handle the seventh grade of MTs PEMNU Talang Padang, the students' scores on reading comprehension are generally low. The statement is confirmed by the results of a presurvey to the seventh graders, in which only 20% of the students passed the minimum completion criteria (i.e. 65) for the reading skills.

To address the issue, problem-based learning (PBL) strategy will be considered for helping the students improve their reading skills. Problem-based learning strategy is selected because we need a more effective strategy to motivate the students to engage in reading activities, as well as to make the

³Ibid.

classroom instruction more interesting. Hence, this research will investigate whether problem-based learning strategy produces a positive effect on the students' reading comprehension.

B. Identification of the Problem

The following problems have been identified:

1. The students have very little motivation during the classroom reading activities.
2. The students have a low vocabulary level.
3. The students have a low level of grammar skills.
4. The students cannot meet the minimum completion criteria (i.e. 65)

C. Limitation of the Problem

The problems are associated only with the influence of problem-based learning strategy to improve the students' reading comprehension in descriptive texts.

D. Formulation of the Problem

The primary research question is: Is there any influence of problem-based learning strategy on the students' reading comprehension in descriptive texts?

E. Research's Objective and Benefits

1. Objective

The main objective of this study was to determine the effect of problem-based learning strategies on students' reading comprehension in descriptive texts.

2. Benefits

The research is expected to bring the following benefits, either for the students or the teachers:

- a. For the students:
 - 1) it will help the students improve their reading comprehension effectively and efficiently;
 - 2) it will motivate the students to enjoy reading activities and perform better in the national final

examination since the test mostly consists of reading texts.

b. For the teachers:

- 1) It will give information about the methods, techniques and strategies the English teachers can use for classroom reading activities;
- 2) it will make the teachers realize the potentials of problem-based learning for teaching reading comprehension in an engaging way.

F. Scope of the Research

1. **Subjects.** The subjects include all the seventh-grade students of the second semester at MTS PEMNU Talang Padang during the academic year of 2020-2021.
2. **Variables.** The variables are problem-based learning (PBL) strategy and the students' reading comprehension in descriptive texts.
3. **Time.** The research was conducted in the second semester of the academic year 2020/2021.
4. **Site.** The research was conducted at MTS PEMNU Talang Padang, Tanggamus, Lampung.



CHAPTER II

REVIEW OF RELATED LITERATURES

A. Frame of Theories

1. Reading Comprehension

Kamiyama believes that reading is a critical skill for English language learners in today's world since it supports the development of overall proficiency and provides access to crucial information at work and in school.⁴ Reading facilitates deeper understanding by helping people obtain more information, whether they are doing a job, learning new things, or finding pleasure in literature. Pradana stated that Reading is needed by people around the world.⁵ Reading, as Tankersley suggests, is also a complex process made up of several interlocking skills and processes.⁶ It is one of the basic skills that positively contributes to knowledge expansion, vocabulary building, and writing skill. Praveen and Patel state that reading is the most useful and important skill for people, even compared to speaking and writing.⁷ It is a process of sequence between something written and the knowledge of speaking and writing. In other words, reading is an essential complex activity involving language and thought to get meaningful message out of information sent by the writer through graphic or written verbal symbols.

⁴Reyko Kamiyama, "CAR: A Means for Motivating Students to Read", United States of America: English Teaching Forum, 2009, No. 3, p. 32

⁵Satria, Adi Pradana "The Analysis of Teaching and Learning Reading through Think-aloud Method", The Journal of English Language Teaching in Foreign Language Context, 2017, p. 170

⁶Karen Tankersley, *Treads of Reading*, United States of America: Association for Supervision and Curriculum Development, 2003, p. 2

⁷M.F. Patel & Praveen M. Jain, *English Language Teaching*, Jaipur: Sunrise Publishers and Distributors, 2008, p. 113

According to Sharon and Sylvia, comprehension is defined as the active process of constructing meaning from text, which involves accessing prior knowledge, understanding vocabulary and concepts, making inferences, and linking keyideas.⁸ Comprehension describes a mechanism of text interpretation that requires the reader's interaction and prior knowledge in order to successfully obtain information. Linda and Carla explain comprehension as a complex process regulated by cognitive, emotional, perceptual, and socialexperiences.⁹ Knowledge of the world plays a significant role in the understanding of a reading text.

McNamara suggests that comprehension is not always effortless and fast. When the beginning reader struggles over individual words, reading is slowed to a near halt and deeper levels of comprehension are seriously compromised.¹⁰ Comprehension, strictly speaking, is not the ability of how fast readers can find the information in the text but how effective they are in doing it. Comprehension needs not only deeper but also efficient thinking to grasp the essence of the text. The concept encompasses the ability to construct meaning and knowledge in order to achieve the purpose of reading.

Reading comprehension, as Snow says, is a process of simultaneously extracting and constructing the meaning via interaction with the text.¹¹ It entails interaction between the reader and the text as they progress along the pre-

⁸Sharon Vaughn & Sylvia Linan-Thompson, *Research-Based Methods of Reading Intruction*, Virginia, USA:ASCD,2004, 3th edition, p. 98

⁹LindaJ.Dorn&CarlaSoffos, *Teaching for Deep Comprehension*, Australia:Stenhouse Publishers,2005, p. 14

¹⁰Danielle S. McNamara, *Reading Comprehension Strategies: Theories, Interventions, and Technologies*, New Jersey: Erlbaum Associates Inc.Publishers, 2007, p. 4

¹¹Catherine Snow, *Reading for Understanding*, Pittsburgh: RAND Education, 2002, p. 11

reading, reading and post-reading phases. Wainwright believes that reading comprehension is related to the successful or unsuccessful performance of various tasks,¹² such as identifying the main idea, distinguishing between facts and opinions, and drawing a conclusion. Proficient readers, as Moreillon points out, adopt reading comprehension as a strategic tool to solve comprehension problems they encounter in texts,¹³ as well as to explore and discern new things using their own prior knowledge actively.

a. Models of Reading

There are two models of reading, the top-down and the bottom-up models. In the top-down model, the reader tries to acquire a general view of the reading passage by digesting the overall picture. In the bottom-up model, on the other hand, the reader focuses on the individual words and phrases, and obtains understanding by stringing these detailed elements together to build up a whole.¹⁴

b. The Importance of Learning Reading Comprehension

Mastery of reading comprehension skills increases the pleasure and effectiveness of reading. Strong reading comprehension skills help in all other subjects as well as in the personal and professional lives. The high-stake tests that control advancement through elementary, middle, and high school and determine entrance to college are, in large part, a measure of reading comprehension skills. Building reading comprehension skills requires a long-term strategy in which every reading skill area, such as fluency and vocabulary, will contribute to success. Reading comprehension is important

¹²Gordon Wainwright, *How to Read Faster and Recall More*, United Kingdom: How-To Content, a Division of How-To Books, Ltd., 2007, p. 35

¹³Judi Moreillon, *Collaborative Strategies for Teaching Reading Comprehension*, Chicago: American Library Association, 2007, p. 10

¹⁴Jeremy Hermer, *The Practice of English Language Teaching*, Longman: Longman, p. 201

particularly for students since the more effective their reading is the more information they can procure from a text.

c. Comprehension Level

Petter suggests that reading comprehension occurs at four levels of complexity: literal, inferential, critical, and creative.¹⁵

1) Literal Level

At literal level, the reader understands the basic facts. For example, they know such explicit information as the lady's name is Miss Chow, she lives in an apartment on the floor, her neighbours are noisy, and she has complained to the landlord before.

2) Inferential Level

At inferential level, the reader is able to go beyond what is written and add meaning or draw conclusions. For example, they may infer that Miss Chow believes that her landlord will tell the neighbours to be less noisy, that he will sort the matter out for her, but things may not improve even if the landlord does complain.

3) Critical Level

At critical level, the reader assesses the good sense of what they are reading, its clarity, accuracy and any apparent exaggeration or bias. For instance, when Miss Chow's landlord offers her a different apartment on the 18th floor and says it is the best apartment, with the best view of the harbour, the reader knows he could be exaggerating.

4) Creative Level

At creative level, the reader can take information or ideas from what they have read and develop new ideas from it. The creative level stimulates the reader to new and original thinking. For example, the reader may come to understand that landlords should write a clause in their leasing agreement to say that if the tenant makes

¹⁵Ibid., p. 205

noise and the landlord receives complaints, the tenant will be asked to leave within one week.¹⁶

d. Test Criteria

The test to measure reading comprehension should be as accurate as possible. Since this research focuses on literal comprehension, the following criteria is considered for the reading comprehension test:

- 1) The purpose of the test (screening, progress monitoring, assessing level of reading, research, or assessing students' competence in comparison to peers).
- 2) The specific information needed on the students' reading comprehension (types of questions missed, level).
- 3) The number of students being tested (an individual, a small group, or a whole class).
- 4) The length of the test (e.g., shorter tests can be easier to give and less stressful for the students, but may not have enough questions or types of tasks to provide sufficient information about their performance).
- 5) Test administration, i.e. whether it is an individually- or group-administered test.
- 6) The number of forms available with the test, particularly if multiple administrations are needed (e.g., many norm-referenced tests come with two forms, making them useful for assessing progress over time—students are given one version of the test as a pre-test and another as a post-test).
- 7) For norm-referenced tests, the extent to which the norming sample is similar to the students to whom the test will be administered.
- 8) The examiner's qualifications (e.g., whether the tester has the skills to give highly specific tests).
- 9) The amount of training needed to administer the test, score it, and interpret the results (e.g., norm-referenced tests typically require some training).¹⁷

¹⁶Peter Westwood, *Reading and Learning Difficulties: Approaches Assessment*, Australia: ACER Press, 2001, p.21

e. Measurement of Reading Comprehension

Reading comprehension tests typically include one specific form of questions or another, as described below:

1) Pronominal questions, imperatives

This form of questions requires learners to make a written answer which can range in length from a single word to several paragraphs. For reading comprehension, short answers are usually required, hence the name “short-answer questions”.

2) True/false, yes/no, alternatives question, multiple-choice

In this form of questions, the answer is contained within the questions or instructions. Multiple-choice questions focus on details and more general aspects of the text. The correct answer is not always shorter or longer than the distractors.

3) Transfer information

Incomplete information can be used to measure comprehension of the text. Students read the text and fill in the diagram with short notes.¹⁸ It means that, the researcher give treatment to transfer information about Problem Based Learning Strategy for students and than the student can be play thoses strategy in learning reading class.

2. The Concept of Problem-Based Learning

a. Definition of Problem Based Learning

Problem-based learning (PBL) is an instructional strategy of “active learning” often used in higher

¹⁷Janette K. Klinger, Sharon Vaughn, & Alison Boardman, *Teaching Reading Comprehension to Students with Learning Difficulties*, New York: London, 2007, p. 17

¹⁸I.S.P. Nation, *Teaching ESL/EFL Reading and Writing*, New York: Routledge, 2009, pp.77-79

education.¹⁹ In problem-based learning, students confront contextualized, ill-structured problems and strive to find meaningful solutions. Savin-Baden reports that problem-based learning is increasingly seen as a means of encouraging students to learn with complexity.²⁰ It will help students to see that learning and life take place in contexts which affect the kinds of solutions that are available and possible.

According to Goodnough, learning process in a problem-based learning experience is driven by a realistic, well-structured problem that provides a context for students to enhance their knowledge skills.²¹ Problem-based learning is in fact a learning model that results from the process of working towards the understanding and resolution of a problem in a real context. In problem-based learning, students identify the problem of the lesson topic and try to solve it based on their experiences.

b. Instructional Procedure of Problem-Based Learning

In a classroom instruction based on problem-based learning, the students can make small groups and discuss a problem in their own groups. Problem-solving discussion is considered very useful for students in getting the general idea of the text at hand. It will also help them to predict the text using their background knowledge. Knowing how to solve a problem will make students better readers. Anderson outlines the instructional procedure to enhance problem-based learning below:

¹⁹Boud & Faletti, *The Challenge of Problem-Based Learning*, London: Kogan, 1991, p. 39

²⁰Maggi Savin-Baden, *Facilitating Problem-Based Learning*, University Press, 2003, p. 4

²¹Karen Goodnough, *Taking Action in Science Classrooms through Collaborative Action Research*, Memorial University of Newfoundland, Canada, 2011, p. 86

- 1) Explain to students why problem-based learning is used.
- 2) Establish small teams (4 or 5 students) and assign roles for the team members.
- 3) Present the case to students prior to presenting lectures, assigning readings, etc.
- 4) Students read the case.
- 5) Respond to students' requests for more information.
- 6) Provide list of the instructor's formal learning objectives.
- 7) Student teams assign learning objectives to members for research and preparation of written summaries.
- 8) Lectures, discussions, readings, etc. provide coverage of information related to learning objectives, case resolutions, and justifications.
- 9) Students report within teams on the research of learning objectives.
- 10) Teams discuss the application of learning objectives, lectures, etc. to the case.
- 11) Exchange of ideas among teams.
- 12) Students individually write case resolutions.
- 13) Debrief the case with the class.
- 14) Facilitate discussion to "generalize" the learning from the case experience.²²

Based on the description above, it can be concluded that the instructional procedure problem based learning are :

- 1) The teacher gives orientation to students as a first step in learning activity.
- 2) The teacher organizes students to form heterogeneous learning groups.
- 3) The teacher directs students to find explanations and solutions to the problem by looking for several

²²James C. Anderson, "Effect of Problem-Based Learning on Knowledge Acquisition, Knowledge Retention, and Critical Thinking Ability of Agriculture Students in Urban Schools", *Journal of Graduate School*, University of Missouri-Columbia, May 2007, pp.74-76

reference sources then conducting an analysis with reference to the goal of problem solving.

- 4) Each group presents the results of problem solving and is responded to by other groups of students.
- 5) The teacher evaluates and provides conclusions on the results of a problem solving that has been carried out by students.

c. Characteristics of Problem-Based Learning

The following are the characteristics of problem-based learning:

- 1) Learning process must be started with a problem, especially an evidently critical, or unsolved, problem.
- 2) Contents and practices must include situations which attract students' attention.
- 3) Teacher must serve solely as a guide in the classroom.
- 4) Students must be given necessary time to think or gather information and to set their strategies in problem solving, and their creative thoughts must be encouraged in this process.
- 5) The difficulty of the subject matter to be studied must not be at a high level which could discourage students.
- 6) A comfortable, relaxing and safe learning environment must be established in order to develop students' skills on thinking and problem-solving by themselves.²³

d. Advantages and Disadvantages of Problem-Based Learning

It is necessary to note that the lack of previous studies on problem-based learning makes it very hard to know the extent of the recognized positive effects of the strategy. However, it is known to offer a number of advantages:

²³Orhan Akinoglu & Ruhan Ozkardes Tandogan, "The Effects of Problem-Based Active Learning in Science Education on Students' Academic Achievement, Attitude and Concept Learning" in *Eurasia Journal of Mathematics, Science & Technology Education*, Marmara University, Istanbul, Turkey, June–November 2006, p.73

- a) problem-based learning displays a significant advantage over traditional methods in how students' communicative skills can be improved;
- b) to increase its effect, the teacher could employ the practice of letting senior students, who have attended the course before and have a good command of the language, act as peer tutors to the students;
- c) problem-based learning encourages students to gain a deeper sense of understanding; and
- d) problem-based learning introduces vocabulary in their real-world contexts, rather than as words on a list; students are not passive receivers of knowledge, but are instead required to actively acquire the knowledge.²⁴

Despite the advantages, we need to be aware of the following conditions since they potentially weaken the effect of problem-based learning:

- a) Students are not homogeneous in background, knowledge, or experience, nor are they homogeneous in their learning abilities in different areas or in their pace and style of learning.
- b) The students are passive recipients and do not learn to dig it out for themselves, or "learn to learn."
- c) This system makes heavy demands on the teachers, as they must constantly update and revise their materials for lectures, readings, or syllabi, so that the information they offer to their students are current.
- d) Students and teachers can obtain a false sense of security if they believe that, once information is dispensed and a cognitive framework provided, the students will incorporate the information, recognize where and when it could and should be used, and apply it effectively at that time.

²⁴John Larsson, "Problem-Based Learning: A Possible Approach to Language Education?", Polonia Institute: Jagiellonian University, p. 3

- e) In teacher-based learning, no one can predict which parts of the information the students have learned will eventually become obsolete or incorrect, what the students will forget, or what new information they will need to know in the future.²⁵

3. The Concept of Numbered Heads Together (NHT) Strategy

a. Definition of Number Heads Together (NHT) Strategy

Numbered Heads Together (NHT), according to Kagan, is a cooperative learning structure that aims to convey the idea that each student has a number and that all the students on a team put their heads together to come up with their best answer.²⁶ NHT is used primarily to develop the students' understanding of the learning material. Hassard points out that NHT can be suitable for performing a small-group activity, answering a question, or completing a hands-on task. It can be a powerful method to encourage student inquiry and problem solving.²⁷ Numbered Heads Together facilitates students to sharpen their critical thinking and be independent learners.

The instructional procedure of NHT, Suprijono suggests,²⁸ starts with the teacher dividing the class into

²⁵Howard S. Barrows, M.D. & Robyn M. Tamblyn, B.Se.N., *Problem-Based Learning: An Approach to Medical Education*, New York: Springer Publishing Company, pp. 8-9

²⁶Spencer Kagan & Miguel Kagan, *Kagan Cooperative Learning*, San Clemente, California: Kagan Publishing, 2000, p. 6.20

²⁷Jack Hassard, *Science as Inquiry*, United States of America: Good Year Books, 2011, p. 23

²⁸Munawaroh, "The Comparative Study between the Cooperative Learning Model of Numbered Heads Together (NHT) and Student Team Achievement Division (STAD) to the Learning Achievement in Social Subject" *IOSR-JRME*, Vol.5/Jan-Feb, 2015, p. 27

small groups and numbering each student in every group. The teacher then provides several questions to each group and gives them time to look for the answers. Afterwards, the teacher calls the students who have the same number and asks them to provide the answers to the questions that they have received previously. The procedure is repeated until all students with the same number of each group get a turn. Hence, NHT progresses from grouping to numbering to discussion.

NHT is virtually suitable for any kind of material. It can motivate students to learn and strengthen their understanding because it has a simple four-step structure. Moreover, it develops team-building skills and provides a safe risk-taking environment, in which group members must arrive at a consensus in terms of the answers. This situation is less threatening for students who are shy or have difficulty speaking orally.

Like other cooperative learning strategies, Numbered Heads Together provides an ideal vehicle for teachers to structure the environment for successful peer interactions and to provide students with the coaching and support they need to develop their social and emotional skills and understanding. Slavin adds, "Cooperative learning methods are structured, systematic instructional strategies capable of being used at any grade level and in most school subjects. All of the methods involve having the teacher assign the students to four- to six-member learning groups composed of high-, average- and low-achieving students, boys and girls, black, Anglo and Hispanic students, and mainstreamed academically-handicapped students as well as their non-handicapped classmates. In other

words, each group is microcosm of the class in academic achievement level, sex, and ethnicity.”²⁹

Furthermore, according to Brown,
 “Cooperative learning does not merely imply collaboration. To be sure, in a cooperative classroom the students and teachers work together to pursue goals and objectives. But cooperative learning is more structured, more prescriptive to teacher about classroom techniques, more directive to students about how to work together in groups (than collaborative learning).”³⁰

In conclusion, a cooperative learning strategy can boost both academic and social outcomes. The teacher can help the students not only to understand the learning material but also to build their social skills.

b. Principles

1) The Purposes of NHT Strategy

Kagan lays out the purposes of NHT as follows:³¹

- a) NHT builds individual accountability.
- b) Students are able to rehearse their responses.
- c) Students gain confidence in sharing their ideas.
- d) NHT builds students’ knowledge around individual responses.

²⁹Robert E. Slavin, et al., *Learning to Cooperate, Cooperating to Learning*, New York: SSB, 1985, p. 6

³⁰H. Douglas Brown, *Teaching by Principles: An Interactive Approach to Language Pedagogy*, San Francisco: State University, 2001, p. 47

³¹Kagan, Spencer and Miguel Kagan. *Kagan Cooperative Learning*. San Clemente, California: Kagan Publishing, 2000, p. 57

- e) Students are able to process information, communicate, think, review the material, and check their prior knowledge.

2) Instructional Procedure of NHT Strategy

Kagan suggests the following instructional procedure of NHT strategy:³²

- a) Step one: *Numbering*. The teacher divides the students into three- to five-member teams and has the number off so each student on the teams has a different number between 1 and 5.
- b) Step two: *Questioning*. The teacher poses the students a question. Questions can vary. They can be very specific and in question form, such as “How many states in the Union?”, or they can be directives, such as “Make sure everyone knows the capitals of the states that border on the Pacific Ocean.”
- c) Step three: *Heads Together*. The students put their heads together to figure out and make sure everyone knows the answer.
- d) Step four: *Answering*. The teacher calls a number and the students from each group with that number raise their hands and provide answers to the whole class.

The following variation can also be used in the classroom:³³

- a) *Paired Heads Together*. Students are in shoulder-partner pairs. After the teacher presents a question, pairs huddle to improve the answers they have each written. The teacher then calls for either A or B to share their best answer with their face partner.

³²Richard I. Arends, *Learning to Teach* (9th ed.), New York: McGraw-Hill, 2012, p. 371

³³S. Kagan & Miguel Kagan, *Kagan Cooperative Learning*, p. 6.30

- b) *Traveling Heads Together*. Traveling heads starts the same as numbered heads, but when the teacher calls a number, the students with that number on each team stand, then ‘travel’ to a new team to share their answers. For fun, seated students beckon for a standing student to join their team.
- c) *Stir-the-glass*. Teams stand around the outside of the class with spaces between teams. Teammates stand shoulder-to-shoulder. The teacher poses a question, then the students write their own answers on an answer board or slip of paper. Teammates huddle to reach consensus, then unhuddle when done. The teacher selects a number and tells the students with that number how many teams to rotate forward to share their answers.

In order to have small groups work together successfully, a teacher has to compose five essential elements in each lesson, as recommended by Johnson & Johnson:

- 1) *Positive interdependence*. Each member of the group is responsible for the success of the group as a whole and is assigned a fair share of work.
- 2) *Face-to-face interaction*. Students work in close physical proximity, which enables them to communicate easily and provides opportunities for oral practice.
- 3) *Individual accountability*. Every student is accountable for carrying out their assigned tasks. All members are aware that every individual has a role to play in completing the activity.
- 4) *Social skills*. Group learning activities provide an opportunity for communication and interaction.

- 5) *Group processing*. Throughout the course of an activity, group members are aware of their learning on a metacognitive level. Group processing provides students a chance to give and receive feedback and enhances the skills of each group member.³⁴

c. Advantages and Disadvantages

NHT strategy offers teachers a number of strengths in teaching reading, as explained below:³⁵

- a) It increases students' motivation since the strategy has the sense of competition and fun for them. Help from teammates will further encourage students to take an active role during the lesson.
- b) It boosts students' retention. NHT decreases dominance from smart students so that students' equal participation will be apparent. Since all students have to answer the question, everyone including the shy or weak ones will engage in reporting the answer.
- c) It promotes positive competition. NHT can extend students' engagement as well as improve their academic achievement. It is also compatible with almost all subject areas.
- d) It promotes discussion in both individual and group accountability. NHT encourages peer tutoring from high-achieving students to their low-achieving teammates. Peer tutoring will encourage more

³⁴Azam Mohammadi & Mehran D., "The effect of cooperative learning techniques on reading comprehension ability of Iranian EFL learners", *International J. Soc. Sci. & Education*, Vol. 5, 2005, p. 526

³⁵Setya, et al., "The Effect of Using Numbered Heads Together Technique on the Eighth Grade Students' Reading Comprehension Achievement at SMPN 2 Tanggul, Jember", *Pancaran Journal*, Vol. 2, 2013, p. 203

dynamic exchanges of information compared to rote memorization and individual textbook work.

However, teachers who implement NHT must be aware of its potential weaknesses:

- a) In NHT, the division of groups should be equal, with each group consisting of higher, average and lower achievers. Therefore, group division should be done by the teacher. However, it is important to note that if some students reject the resulting group composition, the teacher should be able to explain the basis of the division to the students.
- b) Students probably overhear or cheat from another group. For this reason, the teacher should make reasonable space between groups. If any students cheat from another group, the teacher should punish their group by not giving point to them although their answer is correct.³⁶

4. Implementation of Problem-Based Learning in Teaching Reading

Problem-based learning can be described in many ways, but it is possible to see at least three common threads in all of them. First, there is a clear purpose in regard to an area of study, i.e. to integrate practice and theory so as to produce sound understanding and action. Second, there is an educational process carefully considered and designed to achieve this purpose. Third, the process is itself content specific and reflects the process which leads to the generation of knowledge in the area of study in the first place. This third thread can be explained more fully along the following lines. A problem-based learning is not general problem solving, but focuses specifically on content (or subject matter) central to the area of study by requiring

³⁶Ibid, p. 204

students to acquire important knowledge in the process of tackling problematic situations.

B. Theoretical Framework

A variable refers to a construct or a characteristic that can take on different values or scores.³⁷ In experimental studies, the treatment is the independent variable and the outcome is the dependent variable.³⁸ The independent variable affects the other variables or are suspected as the cause of the other variables. On the other hand, the dependent variable is affected by the independent variable or emerges as a result of the independent variable. In this research, the independent variable is problem-based learning model and the dependent variable is reading comprehension.

This research uses quantitative approach since the subject matter deals with a relationship that can be answered by gathering and statistically analyzing numeric data. Two means, the pre-test and the post-test, will be statistically analyzed to determine the effect of problem-based learning on the students' reading comprehension. Thus, this research is an experimental study, which investigates the effect of a systematic manipulation of one variable on another variable. The experiment will be carried out at MTs PEMNU Talang Padang, with the sample consisting of 35 seventh-grade students of 2020/2021 academic year. The students belong to the same classroom and consists of male and female. They are included using purposive sampling. To collect the data, a set of tests will be administered to examine the effectiveness of problem-based learning in improving the students' reading comprehension.

³⁷Donald Ary, Lucy Cheser Jacobs, Asghar Razavieh, & Christine K. Sorensen, *Introduction to Research in Education*, Canada: Wadsworth, 2010, p. 37

³⁸Ibid.

C. Hypothesis

Based on the theoretical framework and paradigm above, the following hypothesis is formulated:

The application of problem-based learning will have effect on students' reading comprehension of descriptive texts.



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